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09/640,284

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Yiming Ye

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EXAMINER

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ART UNIT

PAPER NUMBER

2672

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/640,284

Applicant(s)

YE, YIMING

Examiner

Javid A Amini

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,9-14,19 and 21-26 is/are allowed.
- 6) ☒ Claim(s) 1-6,8,15-18,20 and 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments filed May 04, 2004 have been fully considered but they are not persuasive.

- Applicant on page 12 lines 15-23 argues the reference Monroe does not anticipate the claim invention in claims 1, 15, 27 and 29. Applicant on page 12 regarding claim 1 specifically argued that the reference Monroe does not anticipate the following part of the claim 1: “a signal display for displaying the signal pattern generated by said generated signal template as a visual image; a signal display controller for controlling position and orientation of said signal display;”
Examiner’s reply: A person skilled in the art would capture the above scenarios as a displaying an image on a screen and also the signals which are involved to generate and controlled the position of the image on the screen (horizontally and vertically). The reference in figs. 2 illustrates a camera that displaying the generated signal template on the screen.
- Applicant on page 12 regarding claim 15 specifically argued that the reference Monroe does not anticipate the following part of the claim 15: “acquiring, visually, an image of the signal pattern displayed by the signal display using the visual recording device”. Examiner’s reply: A person skilled in the art would capture the above scenarios as a displaying an image. The reference Monroe in figs. 2 illustrates a recording device (a camera).
- Applicant on page 12 regarding claims 27 and 29 argued similar to the above arguments. Except in claim 29 applicant discloses “the signal pattern is a visual

pattern of blobs.” Examiner’s reply: A person skilled in the art would take the equivalent of “a visual pattern of blobs” as a visual pattern of pixels or dots or lights or spots on a screen.

- Applicant on page 13 lines 6-9 argues that the reference does not teach “a signal display controller for controlling position and orientation of said signal display”.

See above response.

- Applicant on page 13 lines 10-12 argues that the reference does not teach that a signal display controller controls a position and orientation of a display.

Examiner’s reply: The step is inherent because a controller controls the display image.

- Applicant on page 13 lines 13-16 argues that the reference does not teach that a signal display controller controls a position and orientation of a display.

Examiner’s reply: See above response.

- Applicant on page 13 lines 17-23 argues similar as above arguments.
- Applicant on page 14 lines 1-5 argues that the reference does not teach an image displayed on a signal display. Examiner’s reply: Monroe in figs. 1-4, 6, 9 and 16 illustrates a display.
- Applicant on page 14 lines 9-17 argues the reference does not teach the claims 6 and 18. Examiner’s reply: Monroe in paragraph 0019 teaches the limitations of claims 6 and 18.
- Applicant on page 15 1-23 argues the reference Monroe and Rhoads do not teach the limitations in claims 4, 5, 8, 16, 17, 20, 28 and 30. Applicant keeps arguing

the applications of the references, knowing that the applicant's claim language covers the reference's invention. Applicant on page 15 argues that Monroe teaches a camera having a view of an aircraft. Nowhere does Monroe teach or suggest pixels. Examiner's reply: Monroe has shown inherently a display that displays an image (an aircraft, a person, an object or nothing). Monroe's invention is based on security system for an object; therefore the sensitivity of detecting lights (pixels/dots/blobs) must be very high, in order to have an accurate reading. The detection is comparing the images based on a different or the same pixels data pattern.

- Applicant on page 15 argues that the references are apparently in hindsight. Examiner's reply: Applicant on page 9 lines 1-5 of specification discloses "non-emitting wireless communication technique". Applicant on page 10 lines 10-15 discloses that a method between a transmitting device and a receiving device The provided knowledge from applicant disclosure, direct an ordinary skill in the art toward a fig. 6 item 212 and also see 0072, 0083 and 0115 paragraphs in Monroe' invention and the non-emitting wireless (optically) communication direct a person skilled in the art toward an internet as Rhoads's invention describes in 0136, 0299, 0371 and 0373 the non-emitting wireless (optically).

See MPEP under (ARGUING IMPROPER RATIONALES FOR COMBINING REFERENCES, A. Impermissible Hindsight): "[a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed

invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." In re McLaughlin 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971).

Based on the above reasons the previous rejection still maintained.

Examiner's suggestion: Schedule an interview with the Examiner.

Drawings

New corrected drawings are required in this application because figures 1-18 contain hand drawing and typing. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Allowable Subject Matter

1. Claims 7, 9-14, 19 and 21-26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6, 15, 18, 27 and 29 rejected under 35 U.S.C. 102(e) as being anticipated by Monroe.

2. Claim 1.

Monroe in Fig. 1 illustrates "A communication system". Monroe in Figs. 3a and 3b illustrates a signal-transmitting device having a sending CPU and a sending memory, and also see paragraph 0024. Monroe in paragraph 0068 discloses advanced semiconductor elements, such as integrated circuit types that may include integral temperature and/or humidity sensors, references, analog/digital convertors, protocol engines and serial driver, "a generated signal template for generating a signal pattern to be transmitted"; Monroe in Fig. 3 illustrates a signal display for displaying the signal pattern generated by said generated signal template as a visual image; a signal display controller for controlling position and orientation of said signal display; a signal receiving device for communicating with said signal transmitting device having a receiving memory and a receiving CPU; a visual recording device for sensing the signal pattern displayed by the signal display; an image decoder for decoding the signal pattern; Monroe in paragraph 0083 discloses that An onboard dual GPS systems on the aircraft, with one GPS at the tail and one at the nose, used in conjunction with the GPS system 64 permits the system to determine size, heading and distance to the aircraft being monitored, providing accurate location information and permitting the camera to automatically adjust to monitor the entire aircraft within its range. "a visual recording device controller for automatically controlling the orientation and zoom of said visual recording device, wherein communication between said

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signal transmitting device and said signal receiving device is established by the visual recording device detecting and decoding the visual images displayed by the signal display” and also see paragraph 0076-0080.

3. Claim 2.

The system of claim 1, wherein a plurality of mirrors are used to transmit signal patterns between a signal transmitting device and a signal receiving device having obstructions between them. Monroe in paragraph 0091 discloses that the use of two GPS receivers provides redundancy, better accuracy and orientation information for the aircraft by reporting two distinct position datum signals.

4. Claim 3.

See rejection of claim 1.

A method of visual communication between a signal transmitting device and a signal receiving device comprising the steps of: adjusting a signal display of said signal transmitting device and a visual recording device of said signal receiving device and using an alternating display process to establish a visual connection between said signal display and said visual recording device; encoding a signal pattern using a generated signal template of said signal transmitting device; visually transmitting the signal pattern through free space from the signal display of said signal transmitting device; receiving an image of the signal pattern using the visual recording device of said signal receiving device; and decoding the signal pattern using an image decoder of the signal receiving device.

5. Claim 6.

Monroe in Fig. 1 illustrates the step of the step of adjusting the visual recording device includes the steps of: automatically adjusting pan and tilt of the visual recording device to have a view of the signal pattern displayed by the signal display; and automatically adjusting an angle size of the recording device.

6. Claim 15.

See rejection of claim 1.

A program storage device readable by machine, tangibly embodying a program of instructions executable by machine to perform method steps for communication between processing devices comprising the steps of: generating a signal pattern using a generated signal template; displaying the signal pattern on a signal display; adjusting a visual recording device and said signal display and using an alternating display process to establish a visual connection between the processing devices; acquiring, visually, an image of the signal pattern displayed by the signal display using the visual recording device; and decoding the signal pattern with an image decoder.

7. Claim 18.

See rejection of claim 6.

The program storage device of claim 15, wherein the instructions for performing the step of adjusting the visual recording device and said signal display includes instructions for: automatically adjusting the pan and tilt of the visual recording device to have a view of the signal pattern displayed by the signal display; and automatically adjusting the angle size of the recording device.

8. Claims 27 and 29.

See rejection of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, 8, 16, 17, 20, 28 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Monroe, and further in view of Rhoads.

9. Claim 4.

Monroe discloses a visual recording device see Fig.1. But Monroe does not explicitly specify the image processing section however, Rhoads in Figs. 21A and B illustrates the step of dividing the image of the signal pattern into a plurality of blocks. Rhoads in Fig. 6 illustrates the step of determining the centers of said blocks using a position and radius look-up table and also see in Fig 22 illustrates using four points (954) to guide all further image processing operations. Rhoads in Figs. 19 and 20 illustrates a plurality of circles within said blocks having corresponding centers and radiuses determined by the position and radius look-up table. Rhoads in paragraph 0570 teaches The exemplary application uses six basic parameters: 1) luminance; 2) difference from local average; 3) the asymmetry factor (with or against the grain); 4) minimum linear factor; 5) bit plane bias factor; and 6) global gain (the user's single top level gain knob). Rhoads in paragraph 072 teaches that first scan this into a digitized form via a normal high quality black and white scanner with a typical photometric spectral response curve, as for “determining a plurality of black and white intensities from said average intensities of respective blocks of each of said circles using predetermined values”. Rhoads in Fig. 40 illustrates the step

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of decoding a pattern created by said black and white intensities. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Rhoads's method, that includes inputting image data corresponding to an interpretable image displayable by a display device into Monroe's invention in order to provide better security and safety of data.

10. Claim 5.

See rejection of claim 4.

The method of claim 3, wherein the alternating display process comprises the steps of: alternating an image on the signal display of a sending device within an allotted time; collecting a plurality of alternating images by a visual recording device of a receiving device within an allotted time; calculating image differences of consecutive alternating images; changing said image differences into black and white images based on pixel values; and collecting a plurality of blobs for each of said image differences using the visual recording device, wherein the blob having a largest area value represents the signal display.

11. Claim 8.

Rhoads in paragraph 0332 teaches the blobs are groups of adjoining pixels each having an identical pixel value.

12. Claim 16.

See rejection of claim 4.

The program storage device of claim 15, wherein the instructions for decoding includes instructions for: dividing the image of the signal pattern into a plurality of blocks; determining the centers of said blocks using a position and radius look-up table; creating a plurality of circles

within said blocks having corresponding centers and radiuses determined by the position and radius look-up table; calculating average image intensities within said circles; using average image intensities within said circles as average image intensities of respective blocks of said circles; determining a plurality of black and white intensities from said average intensities of respective blocks of said circles using predetermined values; and decoding a pattern created by said black and white intensities.

13. Claim 17.

See rejection of claim 5.

The program storage device of claim 15, wherein the alternating display process comprises the steps of: alternating an image on the signal display of a sending device within an allotted time; collecting a plurality of alternating images by a visual recording device of a receiving device within an allotted time; calculating image differences of consecutive alternating images; changing said image differences into black and white images based on pixel values; and collecting a plurality of blobs for each of said image differences with the visual recording device, wherein the blob having a largest area value represents the signal display.

14. Claim 20.

Rhoads in paragraph 0332 teaches the blobs are groups of adjoining pixels each having an identical pixel value.

15. Claims 28 and 30.

See rejection of claim 8.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Javid A Amini
Examiner
Art Unit 2672

Javid Amini

Jeffery A. Bries
JEFFERY BRIES
PRIMARY EXAMINER